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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/747,810	12/29/2003	Timo Koskinen	79856	1876

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EXAMINER

HUG, ERIC J

ART UNIT

PAPER NUMBER

1731

DATE MAILED: 06/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/747,810	Applicant(s) KOSKINEN ET AL.	
	Examiner Eric Hug	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 5 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim, or amend the claim to place the claim in proper dependent form, or rewrite the claim in independent form.

Claim 4 recites that the amount of surface sizing per side is 3 g/m^2 . Claim 5, which depends on claim 4, recites that the amount is under 2 g/m^2 .

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Wennerblom et al (US 3,941,902).

Wennerblom discloses a method of making surface-treated paper that has been calendered to a predetermined roughness (i.e., smoothness) prior to surface treatment. The treatment may be a surface sizing. The minimum amount of size that is applied to the paper

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(P_{\min}) depends on the degree of surface roughness (Fig. 2). Papers were calendered between at least one nip comprising a steel roll and a soft counter roll (column 6, lines 19-32). In the given experiments, calenders having up to eight nips were used to obtain different surface roughness (column 4, lines 33-43). The papers treated include printing papers comprising up to 80% mechanical pulp (column 4, lines 33-35).

3. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Donigian et al (US 5,505,820).

Donigian discloses a method of calendering a printing paper having a particular level of moisture such that the calendered paper has improved smoothness after a subsequent rewetting process, such as surface sizing. The paper may be derived from mechanical pulp (column 7, lines 32-35). Example 1 (column 4) discloses properties of paper wherein the calendering was performed before and after surface sizing. In this example, two steel nips were used, however the method can be also used utilizing nips formed between a hard, non-resilient roll and a soft, resilient roll during supercalendering.

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Tamagawa et al (US 5,200,258).

Tamagawa discloses a photographic printing paper that is calendered between a synthetic resin roll and a hard metallic roll. The paper may be treated with a surface size applied at a weight of 0.1 to 5.0 g/m² (column 3, lines 50-66). The paper may be calendered before surface sizing (column 3 line 67 to column 4, line 16).

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5. Claims 10-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Kohler et al (US 6,872,282). Kohler discloses in Example 1, column 14, a surface-sized, calendered printing paper made from woodpulp (mechanical pulp) and 33% filler, whereby the paper is treated with 1.12 g/m² of surface size on both sides and calendered to a Parker Print Surface roughness of 1.1 μm.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wennerblom et al (US 3,941,902).

As discussed for claims 1 and 2 above, Wennerblom discloses a method of making surface-treated paper that has been calendered to a predetermined roughness (i.e., smoothness) prior to surface treatment. The treatment may be a surface sizing. The minimum amount of size that is applied to the paper (P_{min}) depends on the degree of surface roughness (Fig. 2).

Papers were calendered between at least one nip comprising a steel roll and a soft counter roll (column 6, lines 19-32). In the given experiments, calenders having up to eight nips were used to obtain different surface roughness (column 4, lines 33-43). The papers treated include printing papers comprising up to 80% mechanical pulp (column 4, lines 33-35). The surface

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sized papers were treated on both sides (see Example 1a, column 9). Four calendered and surface-sized papers are disclosed in column 4, whereby the roughnesses range from 40-605 Bendtsen units (ml/min) before sizing, and the amount of surface size applied to those papers range from 1.8 to 7.2 cm^3/m^2 per side. The lower the roughness, the less surface size needed.

It is the examiner's position that the Bendtsen surface roughnesses disclosed by Wennerblom fully encompass the range of roughnesses claimed by Applicant. Note that Wennerblom discloses in column 6, lines 28-32 that Bendtsen smoothnesses as low as 20 ml/min are possible. Although the Bendtsen smoothness is a different and indirect method of measuring surface roughness, Wennerblom teaches that one can extrapolate the data to ideally zero surface roughness, yielding approximately 1.4 cm^3/m^2 in surface size pickup. See Figure 2 and equation IV in column 5. It is also the examiner's position that the amount of surface size used obviates the claimed amounts of surface size. Note that surface size amounts in Wennerblom are given in units of cm^3/m^2 as applied in the wet state instead of g/m^2 on a dry basis, which is explained in column 3, lines 42-47 as covering a wide range of densities of surface size. Thus, it is possible to use amounts of surface size that fall within the claimed ranges. Note particularly Table 1, column 11 which shows a calendered, surface size paper having as low as 0.105 g/m^2 surface size on a dry weight basis. Note also that the filler content of the paper (ash content) given in Example 2B is 12% by weight, which reads on the filler levels given in claims 10-12.

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

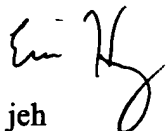
Nissinen (US 6,589,388) discloses a paper calendered to below 2 μ m PPS-10 surface roughness and subsequently coated with a pigmented coating.

Tashiro et al (US 4,935,097) discloses a photographic paper that has been surface sized after calendering.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Hug whose telephone number is 571 272-1192. The examiner can normally be reached on Monday through Friday, 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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